



The Industrial Facility Standard

Summary of Revisions

Version	Date of Revision	Summary of Revisions
1.0	May 2023	This is the first version of this standard.
1.1	May 2024	<p>Minor edits have been made throughout the document.</p> <p>Reported Data: Updates have been made regarding how to quantify the emissions for electricity generation and drilling at an industrial facility.</p> <p>Concerning Emissions: Section has been updated to provide further clarity on emissions in the on-site transportation source category. Provisions have been added regarding emissions related to activities of a CCUS project.</p> <p>Electricity Output Ratio: Exclusions for calculating the electricity output ratio have been updated.</p>

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1. Introduction

1(1) This standard is adopted under *The Management and Reduction of Greenhouse Gases (Standards and Compliance) Regulations, 2023*.

1(2) Any terms defined in *The Management and Reduction of Greenhouse Gases Act* or *The Management and Reduction of Greenhouse Gases (Standards and Compliance) Regulations, 2023*, hold the same definition in this standard.

1(3) Any conflict or inconsistency in the provisions of this standard will be resolved by giving precedence in the following order: (1) the Act, (2) the regulations, (3) this standard, (4) any other document incorporated as part of this standard.

1(4) For greater certainty, any conflict or inconsistency in the provisions of this standard and the ISO 14064-3 or ISO 14065 standards will be resolved by giving precedence to this standard.

1(5) This standard applies to an industrial facility subject to the regulations, other than an industrial facility that is considered an aggregate facility as defined in *The Aggregate Facility Standard*.

1(6) For the purposes of Subsection 2(6) of the regulations and subject to Subsection 4(5) and Sections 6 and 7, the Minister may consider a unit or group of units within the boundary of an industrial facility satisfying the condition in clause 1(6)(a) to be an electricity facility if, in 2022 or a subsequent year:

- (a) one or more units at the industrial facility has an electricity output ratio greater than 50 per cent, as determined in Section 10; and
- (b) the sum of the regulated electricity emissions from the units satisfying the condition in clause 1(6)(a) is greater than or equal to 10,000 tonnes CO_{2e},

unless the regulated emitter provides evidence satisfactory to the Minister that the unit or group of units was under construction between January 1, 2022 and December 31, 2022.

2. Definitions

2(1) In this standard:

“Accredited verification body” means a verification body that meets the following accreditation requirements:

- (a) is accredited to ISO 14065 by the Standards Council of Canada, the American National Standards Institute or any other accreditation organization that is a member of the International Accreditation Forum;
- (b) has a scope of accreditation that is sufficient to verify the information contained in a return or submission; and

(c) is not suspended by an accreditation organization that issued an accreditation.

“Act” means *The Management and Reduction of Greenhouse Gases Act*.

“Aggregate facility” means an industrial facility consisting of a collection of individual facilities that meet the requirements of Subsection 7(3) within *The Aggregate Facility Standard*.

“Authorized signing officer” means a person who has authority to accept legal responsibility on behalf of the regulated facility.

“Baseline emissions” means regulated emissions associated with the production of a commercial product at an industrial facility in a single baseline year that are used in calculating the baseline emissions level for the commercial product produced at the industrial facility.

“Biomass” means non-fossilized plants or plant materials, animal waste or any product made of either of these, including wood and wood products, charcoal, agricultural residues, biologically derived organic matter in municipal and industrial wastes, landfill gas, bio-alcohols, black liquor, sludge digestion gas and animal or plant derived oils. This does not include plant materials used as an input in the production of char or briquettes.

“Direct emissions” means the sum of regulated electricity emissions and regulated industrial emissions for a commercial product produced at a regulated facility.

“Drilling operation” means any activities associated with drilling, drilling services and service operations occurring at a regulated facility with a commercial product in the upstream oil and gas sector.

“Electricity output ratio” means the gross electricity generation from a unit divided by the sum of the output energy from the unit, determined in accordance with Section 10, where both the numerator and denominator are expressed in the same units of measurement.

“Emission quantification methodology” means the procedure employed by a regulated emitter in accordance with Section 3 to quantify the emissions at a regulated facility.

“Flaring emissions” means the controlled release of emissions from industrial activities derived from the combustion or incineration of a gas or liquid stream produced at a facility, used for routine, non-routine or emergency disposal of a waste stream, the purpose of which is not to produce heat or work. This includes emissions from waste petroleum incineration, hazardous emission prevention systems (in pilot or active mode), well testing, natural gas gathering systems, natural gas processing plant operation, crude oil production, pipeline operations, petroleum refining, chemical fertilizer production and steel production.

“Gas-to-power operation” means a unit or group of units at an industrial facility that generates electricity from the combustion of associated gas that would otherwise be vented, flared or released to the atmosphere as leakage emissions.

“Independent reviewer” means a person who is qualified, according to Subsection 25(5), to review the work of the verification team prior to a statement of verification being created.

“Industrial process emissions” means emissions from an industrial process that involves a chemical or physical reaction other than combustion, the purpose of which is not to produce heat or work. This does not include venting from hydrogen production associated with fossil fuel production. Emissions from fuel combustion used to provide heat for an industrial process, whether they be internal or external to the industrial process equipment, are not considered industrial process emissions.

“Industrial product use emissions” means emissions from the use of a product for an industrial process that does not involve a chemical or physical reaction and does not react in the process. This includes releases from the use of sulfur hexafluoride (SF₆), hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs) as cover gases, and the use of HFCs and PFCs in foam blowing. This does not include releases from PFCs and HFCs in refrigeration, air conditioning, semiconductor manufacturing, solvents, aerosols and SF₆ in explosion protection, leak detection, electronic application and fire extinguishing.

“IPCC” means the Intergovernmental Panel on Climate Change under the United Nations.

“ISO” means the International Organization for Standardization.

“ISO 14064-3” means the 2019 version of the Standard ISO 14064-3, published by the ISO.

“ISO 14065” means the 2020 version of the Standard ISO 14065, published by the ISO.

“Leakage emissions” mean the uncontrolled release or leak of emissions from fossil fuel production, processing, transmission and distribution; iron and steel coke batteries; or CO₂ capture, transport, injection and storage infrastructure for long-term geological storage.

“Level of assurance” means the depth of detail that a verification team designs into the verification process and the relative degree of confidence required by a verification team to make conclusions as to whether there are any misstatements.

“Materiality” means the assessment of individual misstatements or the aggregation of misstatements that could misrepresent a regulated facility’s greenhouse gas emissions or commercial production.

“Misstatements” means errors, omissions, misreporting or misrepresentations in the reported greenhouse gas emissions or commercial production for a regulated facility.

“On-site transportation emissions” means the emissions from machinery used for the transport or movement of substances, materials, equipment or commercial products that are used in the production process within the boundary of a regulated facility.

“Production quantification methodology” means the procedure employed by a regulated emitter to quantify the production level at a regulated facility, including detailing the stage of production at which the measurement takes place.

“Regulations” means *The Management and Reduction of Greenhouse Gases (Standards and Compliance) Regulations, 2023*.

“Statement of verification” means the formal written declaration by the verification team that provides an opinion regarding the statements in a submission or return by a regulated emitter for a regulated facility in accordance with the applicable verification criteria in Subsection 25(9).

“Stationary fuel combustion” means the releases from stationary fuel combustion sources at a facility in which fuel is burned for the purpose of producing heat or work to be used at the facility.

“Stationary fuel combustion sources” means devices that combust solid, liquid, gaseous or waste fuel for the purpose of producing useful heat or work, including but not limited to boilers, electricity generation units, co-generation units, duct burners and duct firing, combustion turbines, engines, waste incinerators, process heaters and other stationary combustion devices.

“Venting emissions” means the controlled release of process emissions or emissions contained in waste gas released to the atmosphere. This includes emissions of CO₂ associated with carbon capture, transport, injection and storage; hydrogen production associated with fossil fuel production and processing; casing gas; gases associated with a liquid or a solution gas; treater, stabilizer or dehydrator off-gas; blanket gases; pneumatic devices that use natural gas as a driver; compressor start-ups, pipelines and other blowdowns; and metering and regulation control loops.

“Verification report” means a written report prepared by a verification team during the verification process with respect to a regulated facility.

“Verification team” means a team consisting of one or more qualified persons who satisfy the criteria in Subsection 25(2) that conducts a verification on a regulated facility.

“Waste emissions” means emissions resulting from waste disposal activities at a facility, including landfilling of solid waste, flaring of landfill gas and waste incineration. This does not include emissions resulting from the combustion of waste fuels to produce heat or work.

“Wastewater emissions” means the emissions resulting from industrial wastewater and industrial wastewater treatment at a facility.

2(2) For the purposes of the definition of direct emissions, a regulated emitter shall not include the emissions associated with drilling operations at a regulated facility that has a commercial product in the upstream oil and gas sector.

3. Reported Data

3(1) When reporting data in a submission or return for an industrial facility, a regulated emitter shall report all numerical data to four decimal digits.

3(2) All quantified emissions included in a submission or return shall be converted to tonnes of CO₂e.

3(3) Subject to Subsections 4(9), 4(10), 4(12), 4(15), 4(18), 21(5) and 21(6), as well as Subsection 17(6) of the regulations, a regulated emitter shall ensure that all regulated emissions from an industrial facility are included and accounted for in all submissions and returns.

3(4) A regulated emitter must quantify the commercial production at an industrial facility for a baseline or compliance year using the production quantification methodologies selected in accordance with Section 14, within a margin of error of \pm five per cent.

3(5) Subject to Subsection 3(10), a regulated emitter shall ensure that the production and emissions quantification methodologies and emission factors used to quantify the production and emissions associated with a commercial product at an industrial facility are held constant for each baseline year used to establish a baseline emissions intensity and for each subsequent compliance year.

3(6) If, for any reason beyond the control of the regulated emitter, the data required to quantify the emissions associated with a commercial product at an industrial facility are missing for a baseline year or compliance year, a regulated emitter shall calculate replacement data using:

- (a) quantification methods from Environment and Climate Change Canada's Greenhouse Gas Reporting Program if those methods are applicable; or
- (b) IPCC Guidelines for National Greenhouse Gas Inventories.

3(7) For the purposes of Subsection 3(6), a regulated emitter shall use:

- (a) for a baseline year, the most recently published version of the chosen quantification methods;
- (b) for establishing a baseline for the second compliance year of a new product:
 - (i) the quantification methods used when establishing a baseline for the first compliance year; or
 - (ii) if replacement data was not used when establishing a baseline for the first compliance year, the most recently published version of the chosen quantification methods; and
- (c) for a compliance year:
 - (i) the quantification methods used for the baseline years; or
 - (ii) if replacement data was not used when establishing a baseline year, the most recently published version of the chosen quantification methods.

3(8) A regulated emitter shall ensure any measuring device used to determine a quantity for the purposes of reporting data in a submission or return for an industrial facility is:

- (a) for an industrial facility with a commercial product in the upstream oil and gas sector, installed, operated, calibrated and maintained in accordance with *Directive PNG017 Measurement Requirements for Oil and Gas Operations*; or

(b) for any other industrial facility:

- (i) installed, operated and maintained in accordance with the manufacturer's specifications or any applicable generally recognized provincial, national or international industry standard;
- (ii) calibrated at the lesser of once every three years or the minimum frequency specified by the manufacturer, as well as upon replacement of a previously calibrated measuring device; and
- (iii) maintained to be accurate within \pm five per cent.

3(9) A gas-to-power operation cannot be integrated into more than one industrial facility at the same time.

3(10) In preparing an emissions return for an industrial facility, a regulated emitter may quantify the emissions associated with a commercial product at the industrial facility in a compliance year using:

- (a) the same quantification methodologies and emission factors as those used in the baseline years;
- (b) emission factors other than those used for the baseline years if the emission factors are from a more recent version of the same quantification methodology used by the regulated emitter for the baseline years; or
- (c) an alternative quantification methodology from the one used for the baseline years by:
 - (i) identifying and quantifying in the quantification methodology document submitted as part of the emissions return all material discrepancies between the quantification methodology used in the baseline years and the quantification methodology proposed to be used for the emissions return; and
 - (ii) providing a reason for the change in the quantification methodology document submitted as part of the emissions return.

3(11) The document version and publication date for the alternative quantification methodology requested by a regulated emitter under clause 3(10)(c) must be the same or more recent than the version and publication date of the quantification methodology used by the regulated emitter for the baseline years of the industrial facility.

3(12) Notwithstanding any provisions in this section, if the capacity of electricity generation at an industrial facility, excluding the electricity generation from the combustion of associated gas, is equal to or greater than 1 megawatt, a regulated emitter shall quantify the emissions for electricity generation at the industrial facility, other than the emissions from the electricity generated from the combustion of associated gas, using:

- (a) Part 38 Electricity Generation of the federal Quantification Methods for the *Output-Based Pricing System Regulations* document; or
- (b) another quantification method proposed by the regulated emitter that the minister considers appropriate.

3(13) Notwithstanding any provisions in this section, a regulated emitter shall use Part 1 Item 1 of the federal Quantification Methods for the *Output-Based Pricing System Regulations* document to quantify the emissions from any drilling operations occurring at an industrial facility with a commercial product in the upstream oil and gas sector in a compliance year that a regulated emitter may choose to report, in accordance with Subsection 4(15).

3(14) A compliance obligation incurred by a regulated emitter shall be rounded to the nearest whole number.

4. Concerning Emissions

4(1) Subject to Subsections 4(2), 4(3) and 4(4), the regulated source categories and the greenhouse gas species applicable for each regulated source category for an industrial facility are those included in Table 4 of Appendix C.

4(2) The regulated source categories for a commercial product in the upstream oil and gas sector include:

- (a) stationary fuel combustion emissions;
- (b) industrial product use emissions;
- (c) flaring emissions; and
- (d) on-site transportation emissions.

4(3) The regulated source categories for a commercial product in the natural gas transmission pipeline sector include:

- (a) stationary fuel combustion emissions;
- (b) industrial product use emissions;
- (c) venting emissions;
- (d) flaring emissions;
- (e) leakage emissions; and
- (f) on-site transportation emissions.

4(4) Stationary fuel combustion is the only regulated source category for a gas-to-power operation and drilling operations in the upstream oil and gas sector.

4(5) For the purposes of Subsections 1(6), 16(3) and 16(4), any emissions resulting from the use of duct burners and duct firing shall be reported under the stationary fuel combustion source category of:

- (a) the regulated industrial emissions of the industrial facility if the unit or group of units is within the boundary of an industrial facility and the emissions resulting from the use of duct burners and duct firing do not contribute to the generation of electricity or sold heat; or
- (b) the regulated electricity emissions of the industrial facility if the unit or group of units is within the boundary of an industrial facility and the emissions resulting from the use of duct burners and duct firing contribute to the generation of electricity or sold heat.

4(6) For the purposes of Section 16, a regulated emitter shall include in the direct emissions for an industrial facility any emissions associated with the on-site generation of electricity, unless the emissions associated with the generation of electricity are from a unit or group of units within the boundary of the industrial facility that are considered an electricity facility under Subsection 2(6) of the regulations.

4(7) For clarity regarding Subsection 2(8) of the regulations, if a unit or group of units within the boundary of an industrial facility is considered an electricity facility:

- (a) the emissions that result from the generation of electricity, other than emissions from associated gas combusted in the unit or group of units, from any sold heat and from waste energy from the unit or group of units must be reported under the regulated electricity emissions for the electricity facility;
- (b) the emissions from associated gas combusted in the unit or group of units and the emissions from any heat produced by the unit or group of units that is captured and used on-site (other than energy that is captured and recirculated within the unit or group of units) must be reported under the regulated industrial emissions for the industrial facility; and
- (c) no emissions are associated with the energy that is captured and recirculated within the unit or group of units until that energy leaves the unit or group of units as:
 - (i) electricity, sold heat, or waste energy generated by the unit or group of units; or
 - (ii) heat that is captured and used on-site at the industrial facility.

4(8) In calculating the total emissions for the industrial process source category at an industrial facility, a regulated emitter shall include emissions from the following sources:

- (a) electric arc furnaces, argon-oxygen decarburization vessels or vacuum degassing and ladle furnaces;
- (b) nitric acid production and ammonia steam reforming;

(c) catalyst regeneration, sulphur recovery and coke calcining;

(d) addition of carbonate compound into a lime kiln.

4(9) In accordance with Subsection 9(2), regulated emitter shall not report CO₂ emissions from the following emission sources when calculating an industrial facility's direct emissions from:

(a) the combustion of biomass;

(b) the aerobic decomposition of biomass;

(c) the fermentation of biomass.

4(10) In accordance with Subsection 9(2), a regulated emitter shall not report CH₄ and N₂O emissions resulting from the combustion of biomass for the purpose of generating useful energy at an industrial facility.

4(11) For the purpose of establishing the baseline emissions intensity for a commercial product at an industrial facility, a regulated emitter shall not allocate a quantity of regulated emissions to more than one commercial product produced at the industrial facility.

4(12) Subject to Subsections 4(13) and 4(15), a regulated emitter may omit the emissions from a source from an emissions return or baseline submission if the emissions associated with that source are less than 0.5 per cent of the total regulated emissions for that industrial facility during the baseline or compliance year covered by the return or submission.

4(13) The sum of regulated emissions omitted under Subsection 4(12), other than emissions associated with drilling operations that a regulated emitter may choose to omit pursuant to Subsection 4(15), must not exceed 100 tonnes CO₂e for an industrial facility.

4(14) Notwithstanding Subsection 4(6), if a unit or group of units at an industrial facility that was previously considered to be an electricity facility no longer meets the definition of an electricity facility, a regulated emitter shall apportion and include the regulated electricity emissions associated with that unit or group of units in the baseline emissions and direct emissions for the commercial product or products produced at the industrial facility.

4(15) For the purposes of assessing the total regulated emissions for an industrial facility subject to this standard in a compliance year under Section 22, a regulated emitter may voluntarily report the emissions associated with drilling operations that occurred at the industrial facility with a commercial product in the upstream oil and gas sector in the compliance year if the fossil fuels used for the drilling operations are purchased by the regulated emitter.

4(16) For the purposes of reporting greenhouse gas emissions using information from 2023 or a subsequent year, the prescribed greenhouse gases emitted by an industrial facility shall be converted to CO₂e units using the global warming potentials for those greenhouse gases from IPCC's Fifth Assessment Report, pursuant to Appendix B.

4(17) For greater certainty, a regulated emitter is not required to re-establish a baseline emissions intensity or resubmit an emissions return for an industrial facility using global warming potentials from the IPCC's Fifth Assessment Report if the baseline submission or emissions return was submitted for 2022 or a previous year.

4(18) If a regulated emitter has paid or will pay the federal fuel charge on fuels that result in emissions in the on-site transportation source category during a compliance year, a regulated emitter is not required to include those emissions when establishing the baseline emissions intensity for a commercial product at the industrial facility.

4(19) If emissions in the on-site transportation source category are not included in the baseline submission for commercial products at an industrial facility as per subsection 4(18), a regulated emitter shall not report those emissions as part of the total regulated emissions from the facility during a compliance year.

4(20) Emissions that are captured during a compliance year at an industrial facility subject to this standard must be reported as direct emissions for that industrial facility.

4(21) For certainty, emissions released at a regulated facility that are directly related to the activities of a CCUS project registered with the Ministry of Environment under *The CCUS Credit Standard* shall be included in the project emissions described in Table 1 of *The CCUS Credit Standard*, and not included in the regulated emissions for the regulated facility under this standard.

4(22) For certainty, emissions released at a regulated facility that are directly related to the activities of a CCUS project not registered with the Ministry of Environment under *The CCUS Credit Standard* shall be included in the regulated emissions for the regulated facility under this standard.

5. Registration

5(1) If a regulated emitter is required to register an industrial facility subject to this standard pursuant to Section 5 of the regulations, or if the owner or operator of a facility that, on registration, will be considered an industrial facility subject to this standard chooses to voluntarily register that facility under Section 6 of the regulations, the regulated emitter, or owner or operator, as applicable, must notify the Minister of their intent to register the facility.

5(2) After receiving a notice pursuant to Subsection 5(1), the Minister will provide a registration package to the regulated emitter, or owner or operator, as applicable, for the facility intended to be registered.

5(3) In completing the registration package for an industrial facility, it is the responsibility of the owner or operator to ensure that:

(a) all information provided for the industrial facility, including any information provided by the Minister for the facility is accurate;

(b) all applicable sections of the registration package are completed in full;

- (c) any required supplementary components, such as a map that demonstrates the location of the industrial facility within Saskatchewan are provided; and
- (d) the completed registration package is submitted to the Minister in the manner specified by the Minister.

5(4) For the purposes of clause 5(4)(b) of the regulations, a regulated emitter shall submit the required information to register an industrial facility by March 31 of the year the regulations apply to the facility.

5(5) For the purposes of clause 6(6)(b) of the regulations, the owner or operator choosing to voluntarily register a facility that, on registration, will be considered an industrial facility must submit the required information to register the facility in the year that the owner or operator wants the facility to be considered an industrial facility.

6. Addition Respecting Industrial Facilities

6(1) If an individual facility within an aggregate facility subject to *The Aggregate Facility Standard* has emissions of 25,000 tonnes CO₂e or more, not including any emissions resulting from the combustion of associated gas at a gas-to-power operation, in a compliance year:

- (a) the individual facility will be removed from the aggregate facility at the end of the compliance year in which the individual facility first has emissions of 25,000 tonnes CO₂e or more;
- (b) the individual facility will be considered an industrial facility and subject to this standard beginning on January 1 of the subsequent compliance year;
- (c) the first compliance year for the industrial facility is maintained in accordance with Subsection 12(1) and the reduction periods applicable to the commercial products produced at the industrial facility are maintained in accordance with Subsection 11(5);
- (d) the regulated emitter for the industrial facility shall submit the information required to register the facility in accordance with Subsection 5(3) by March 31 of that subsequent compliance year; and
- (e) notwithstanding Subsection 17(3), the regulated emitter for the industrial facility shall submit to the Minister a baseline submission for the industrial facility by June 1 of that subsequent compliance year.

6(2) If a unit is removed from an electricity facility within the boundary of an industrial facility or if an electricity facility within the boundary of an industrial facility is removed from registration at the end of a compliance year pursuant to Subsection 10(1) of *The Electricity Facility Standard*, then:

- (a) the unit or group of units will be added to the industrial facility on January 1 of the subsequent compliance year;

- (b) the regulated emitter is required to adhere to the requirements of this standard for that unit or group of units beginning on January 1 of the compliance year that the unit or group of units is added to the industrial facility;
- (c) the regulated emitter shall re-establish the baseline emissions intensity for the commercial products at the industrial facility to include the baseline emissions associated with the unit or group of units by June 1 of the compliance year that the unit or group of units is added to the industrial facility; and
- (d) the emissions associated with that unit or group of units shall be reported as part of the industrial facility whose boundary the unit or the electricity facility is within beginning on January 1 of the compliance year that the unit or group of units is added to the industrial facility.

7. Removal Respecting Industrial Facilities

7(1) In accordance with Subsection 9(6) of *The Aggregate Facility Standard*, if an industrial facility subject to this standard with a commercial product in the upstream oil and gas sector had total regulated emissions of 25,000 tonnes CO₂e or more in a previous compliance year but had total regulated emissions of less than 25,000 tonnes CO₂e in the most recent compliance year, a regulated emitter may apply to the Minister to add that industrial facility to an aggregate facility owned or operated by the regulated emitter by providing evidence satisfactory to the Minister that the annual emissions for the industrial facility will not again exceed 25,000 tonnes CO₂e.

7(2) For the purposes of Subsection 7(1), the industrial facility will be added to the aggregate facility owned or operated by the regulated emitter effective upon the next required update to the aggregate facility's information.

7(3) In accordance with Subsections 8(4) and 9(2) of *The Aggregate Facility Standard*, if an industrial facility subject to this standard with a commercial product in the upstream oil and gas sector and total regulated emissions less than 25,000 tonnes CO₂e is added to an aggregate facility owned or operated by the same regulated emitter, the industrial facility will be added to the aggregate facility effective upon:

- (a) the date that the aggregate facility registration is approved by the Minister for Subsection 8(4) of *The Aggregate Facility Standard*; and
- (b) the date of the next required update to the aggregate facility's information for Subsection 9(2) of *The Aggregate Facility Standard*.

7(4) For the purposes of this Subsections 7(1) and 7(3), a regulated emitter that adds an industrial facility to an aggregate facility that they own or operate in a compliance year is not responsible for the facility with respect to the requirements of this standard and instead is responsible for all requirements of that facility as part of the aggregate facility subject to *The Aggregate Facility Standard* for the entirety of the compliance year.

7(5) If a unit or group of units within the boundary of an industrial facility satisfies the criteria in Subsection 1(6) and is considered by the Minister to be an electricity facility pursuant to Subsection 2(6) of the regulations:

- (a) the unit or group of units will be removed from the industrial facility at the end of the compliance year in which the unit or group of units is first considered an electricity facility;
- (b) the unit or group of units will be considered an electricity facility and subject to *The Electricity Facility Standard*, and the regulated emitter shall not report the emissions associated with that electricity facility as part of the industrial facility beginning on January 1 of the subsequent compliance year;
- (c) the regulated emitter who owns or operates the electricity facility shall submit the information required to register the facility in accordance with Subsection 8(3) of *The Electricity Facility Standard* by March 31 of that subsequent compliance year; and
- (d) the regulated emitter shall re-establish the baseline emissions intensity for the commercial products at the industrial facility to remove the baseline emissions associated with the unit or group of units removed from the industrial facility pursuant to clause 7(5)(a) by June 1 of that subsequent compliance year.

7(6) If an electricity facility already exists within the boundary of an industrial facility and a unit within the industrial facility subsequently meets the condition in clause 1(6)(a) in a compliance year:

- (a) the unit will be removed from the industrial facility and no longer subject to this standard at the end of that compliance year;
- (b) the unit will be added to the electricity facility and subject to *The Electricity Facility Standard* as part of the electricity facility on January 1 of the subsequent compliance year; and
- (c) the regulated emitter shall re-establish the baseline emissions intensity for the commercial products at the industrial facility to remove the baseline emissions associated with the unit removed from the industrial facility pursuant to clause 7(6)(a) by June 1 of that subsequent compliance year.

8. Responsibility for an Industrial Facility

8(1) The owner or operator of an industrial facility on December 31 of a compliance year is considered responsible for all requirements of that industrial facility regarding the regulations and this standard for the entirety of that compliance year.

8(2) The owner or operator of an industrial facility with an integrated gas-to-power operation is considered responsible for all emissions and production from the gas-to-power operation for the portion of the compliance year that the gas-to-power operation was integrated into the industrial facility.

9. Apportioning Emissions and Production

9(1) If a unit at an industrial facility combusts a combination of fossil fuels and biomass to generate electricity, the total electricity generated by the unit from fossil fuels during a year shall be determined by:

$$EG_{i-u} = ET_{i-u} \times \left(\frac{\sum_k H_k}{H_B + \sum_k H_k} \right)$$

where:

EG_{i-u} is the total electricity generated, including electricity generated from the combustion of associated gas and other fossil fuels, at unit u in year i , expressed in gigawatt hours;

ET_{i-u} is the total gross electricity generation, including all electricity used on-site and all commercial production of electricity, including from the combustion of biomass, at unit u in year i , expressed in gigawatt hours; and

H_k is the energy input into the unit from fossil fuel k during the year, expressed in gigawatt hours, as determined by:

$$H_k = \sum_j (QF_{k-j} \times HHV_{k-j})$$

where:

QF_{k-j} is the quantity of each type j of fossil fuel k combusted to generate electricity in unit u during the year, expressed in units of volume;

HHV_{k-j} is the higher heating value of each type j of fossil fuel k , expressed in units of energy per unit of volume; and

j is a type of fossil fuel.

H_B is the energy input into the unit from biomass during the year, expressed in gigawatt hours, as determined by:

$$H_B = \sum_l (QF_{B-l} \times HHV_{B-l})$$

where:

QF_{B-l} is the quantity of each type of biomass fuel l combusted to generate electricity in unit u during the year, expressed in units of volume;

HHV_{B-l} is the higher heating value of each type of biomass fuel l , expressed in units of energy per unit of volume; and

l is a type of biomass fuel; and

i is a year; and

k is the kind of fossil fuel, either gaseous, liquid, or solid fuel, combusted in unit *u* during the year.

9(2) In accordance with Subsections 4(9) and 4(10), if a unit at an industrial facility combusts a mixture of biomass and fossil fuels, the emissions associated with that unit during a year, other than those emissions resulting from the combustion of biomass shall be determined by:

$$GHG_u = GHG_T \times \left(\frac{GHG_F}{GHG_B + GHG_F} \right)$$

where:

GHG_u are the greenhouse gas emissions associated with unit *u* in the year to be reported under the regulations, expressed in tonnes CO₂e;

GHG_T are the total emissions from combustion of fuel in unit *u* during the year, expressed in tonnes CO₂e;

GHG_B is the sum of all CO₂, CH₄ and N₂O emissions from combustion of biomass fuel in unit *u* during the year, expressed in tonnes CO₂e; and

GHG_F are the emissions from combustion of fossil fuels in unit *u* during the year.

10. Electricity Output Ratio

10(1) Subject to Subsection 10(2), the electricity output ratio for a unit in a year shall be determined by:

$$EO_{i-u} = \frac{E_{i-u}}{E_{i-u} + (H_{i-u} + S_{i-u}) * p_{i-u}} \times 100\%$$

where:

EO_{i-u} is the electricity output ratio for unit *u* in year *i*, expressed in per cent;

E_{i-u} is the gross electricity generation, including all electricity used on-site and all commercial production of electricity, excluding any electricity generated from the combustion of biomass and associated gas, at unit *u* in year *i*, determined in accordance with Subsection 14(10), expressed in gigajoules;

H_{i-u} is the useful heat or work, including all useful heat or work used on-site, that is output from unit *u* in year *i*, expressed in gigajoules;

S_{i-u} is the sold heat from unit *u* in year *i*, expressed in gigajoules;

p_{i-u} is the percent of input energy fed into unit u in year i that is used in the commercial production of the gross electricity generation from unit u in year i ;

i is a year; and

u is a unit at the facility.

10(2) For the purposes of calculating the electricity output ratio in Subsection 10(1), a regulated emitter shall exclude:

- (a) for a unit within the boundary of an industrial facility, any heat or work resulting from the combustion of associated gas, and the electricity generation resulting from the combustion of associated gas determined in Subsection 14(8); and
- (b) for all units, all waste energy and any heat or work that is captured and recirculated within the unit or group of units at the facility that is not considered sold heat, or useful heat or work.

10(3) For the purpose of determining whether an expanded unit has an electricity output ratio greater than 50 per cent, a regulated emitter shall calculate the ratio in Subsection 10(1) using the values applicable for each variable for the unit after the capacity of the unit was expanded.

11. Reduction Periods

11(1) For the purposes of Section 13 of the regulations and Table 1 of the regulations, each commercial product at an industrial facility will have a reduction period established as follows:

- (a) the first reduction period is applicable to a product in commercial production at the industrial facility during the industrial facility's first compliance year;
- (b) notwithstanding clause 11(1)(a), the first reduction period for a new product in commercial production at an industrial facility is the first year in which the regulated emitter intends to have that product subject to a performance standard;
- (c) subject to Subsection 11(3), for every subsequent compliance year, the subsequent reduction period is applicable to the product in commercial production at the industrial facility;
- (d) if additional reduction periods are not available, the final reduction period applies to the product in commercial production at the industrial facility.

11(2) When an industrial facility has the baseline emissions intensity for a commercial product re-established, the industrial facility will maintain the same reduction period for that product.

11(3) If a product in commercial production at an industrial facility is deemed to be in standby for at least six months of a compliance year, the reduction period for that commercial product shall not advance to the subsequent reduction period in the following compliance year.

11(4) If a regulated emitter removes an industrial facility from registration according to Section 7 of the regulations and subsequently registers that facility at another time, the reduction period continues as though it was never removed from registration.

11(5) If an industrial facility subject to this standard was previously an individual facility within an aggregate facility subject to *The Aggregate Facility Standard*, the reduction periods applicable to the commercial products at that aggregate facility when the industrial facility was removed from the aggregate facility are maintained as the initial reduction periods for the commercial products at the industrial facility upon registration pursuant to this standard.

11(6) Subsequent reduction periods for an industrial facility identified in Subsection 11(5) are established as per the provisions of this section.

11(7) If the generation of electricity from the combustion of associated gas at an industrial facility ceases in a compliance year and recommences in a subsequent compliance year, the reduction period schedule for the electricity generation from the combustion of associated gas will be maintained as if the generation of electricity never ceased.

12. Maintenance of the First Compliance Year

12(1) If an industrial facility registered pursuant to this standard was previously an individual facility within an aggregate facility registered under *The Aggregate Facility Standard*, the first compliance year of that aggregate facility is maintained as the first compliance year for the industrial facility registered pursuant to this standard unless an earlier first compliance year had been established for the industrial facility, in which case the earlier year is maintained as the first compliance year.

12(2) If a unit or group of units within the boundary of an industrial facility was previously registered as an electricity facility pursuant to *The Electricity Facility Standard* and is subsequently added to that industrial facility in accordance with Section 6, the first compliance year for the industrial facility is maintained.

13. Determining Baseline Years

13(1) A regulated emitter shall select the baseline years for an existing product at an industrial facility using the following criteria:

- (a) the baseline years must be three consecutive calendar years;
- (b) the baseline years must be chosen from the five calendar years preceding:
 - (i) the first compliance year for the industrial facility, if the industrial facility was not previously an individual facility within an aggregate facility registered pursuant to *The Aggregate Facility Standard*; or

- (ii) the year in which the facility is considered registered as an industrial facility under this standard, if the industrial facility was previously an individual facility within an aggregate facility registered pursuant to *The Aggregate Facility Standard*.

13(2) A regulated emitter shall establish the baseline years for a new product in the following manner:

- (a) for the first compliance year in which the regulated emitter intends to have that commercial product subject to a performance standard, the regulated emitter shall use the previous two calendar years;
- (b) for the second compliance year in which the regulated emitter intends to have that commercial product subject to a performance standard, the regulated emitter shall use the previous three calendar years;
- (c) the same three calendar years as in clause 13(2)(b) shall be used for all subsequent compliance years for the commercial product unless the baseline emissions intensity for the commercial product is re-established according to the regulations and this standard.

13(3) For purposes of Subsection 8(11) of the regulations, if the information from the baseline years established in Subsections 13(1) for a commercial product produced at an industrial facility that is exiting standby is unavailable or insufficient, the regulated emitter, owner or operator of the industrial facility may apply to establish the baseline information for the commercial product based on other justifiable considerations respecting the special circumstances of the industrial facility.

13(4) Notwithstanding the provisions in this section, for a gas-to-power operation that first generated electricity from the combustion of associated gas in:

- (a) 2020, the baseline years for the electricity generation from the combustion of associated gas are 2021 and 2022; or
- (b) 2021 or a subsequent year, the baseline years for the electricity generation from the combustion of associated gas are the two consecutive years after the year the gas-to-power operation began generating electricity from the combustion of associated gas.

14. Commercial Products

14(1) A regulated emitter shall propose the commercial product(s) and corresponding production quantification methodologies that account for all regulated emissions released at an industrial facility and provide a transparent and accurate representation of the activities at the industrial facility.

14(2) Subject to Subsections 14(3) and 14(4), the commercial product(s) and unit of measure of those products selected for an industrial facility must be held constant for all baseline and compliance years.

14(3) If an industrial facility begins production of a new product, the regulated emitter of the industrial facility may establish a unit of measure and baseline emissions intensity for that new product after it has been in commercial production for at least two calendar years.

14(4) If an industrial facility ends production of a commercial product that has an established baseline emissions intensity:

- (a) the regulated emitter for that industrial facility must notify the Minister in writing that production of the commercial product has ended by March 31 of the year following the year that production ended; and
- (b) the regulated emitter shall not include that commercial product in subsequent submissions or returns.

14(5) The complexity-weighted barrel (CWB) methodology will be accepted as a commercial product for industrial facilities in the refining and upgrading of petroleum sector.

14(6) Notwithstanding Subsections 14(1) and 14(3), the electricity generated from the combustion of associated gas at a gas-to-power operation at an industrial facility shall be considered a commercial product and quantified using units of gigawatt hour.

14(7) The electricity generated from the combustion of associated gas at a gas-to-power operation at an industrial facility cannot be a commercial product placed into standby under Section 8 of the regulations.

14(8) For the purposes of Subsections 14(9) and 14(10), and clause 10(2)(a), the electricity generated from the combustion of associated gas at a unit in a gas-to-power operation at an industrial facility shall be determined by:

$$EP_{i-u} = EG_{i-u} \times \left(\frac{AE_{i-u}}{CE_{i-u}} \right)$$

where:

EP_{i-u} is the electricity generated from the combustion of associated gas at unit u in the gas-to-power operation in year i , expressed in gigawatt hours;

EG_{i-u} is the total electricity generated, including electricity generated from the combustion of associated gas and other fossil fuels, excluding biomass, at unit u in the gas-to-power operation in year i , determined in accordance with Subsection 9(1), expressed in gigawatt hours;

AE_{i-u} is the energy of the associated gas combusted at unit u in the gas-to-power operation in year i , expressed in gigajoules;

CE_{i-u} is the total energy of all fuel combusted at unit u in the gas-to-power operation in year i , expressed in gigajoules;

i is a baseline year for the purpose of calculating baseline information or a compliance year for the purpose of calculating information for an emissions return; and

u is a unit at the facility.

14(9) For the purposes of Subsection 14(6), the electricity generated from the combustion of associated gas at a gas-to-power operation at an industrial facility shall be determined by:

$$EP_i = \sum_u EP_{i-u}$$

where:

EP_i is the electricity generated from the combustion of associated gas at the gas-to-power operation in year i , expressed in gigawatt hours;

EP_{i-u} is the electricity generated from the combustion of associated gas at unit u in the gas-to-power operation in year i , determined in accordance with Subsection 14(8), expressed in gigawatt hours;

i is a baseline year for the purpose of calculating baseline information or a compliance year for the purpose of calculating information for an emissions return; and

u is a unit at the facility.

14(10) For the purposes of Subsection 10(1), the electricity generated from the combustion of fossil fuels, other than associated gas, and not including biomass, for each unit at an industrial facility shall be determined by:

$$E_{i-u} = EG_{i-u} - EP_{i-u}$$

where:

E_{i-u} is the gross electricity generation, including all electricity used on-site and all commercial production of electricity, excluding any electricity generated from combustion of biomass and associated gas, at unit u in compliance year i , expressed in gigawatt hours;

EG_{i-u} is the total electricity generated, including electricity generated from the combustion of associated gas and other fossil fuels, excluding biomass, at unit u in compliance year i , determined in accordance with Subsection 9(1), expressed in gigawatt hours;

EP_{i-u} is:

(a) the electricity generated from the combustion of associated gas at unit u in a gas-to-power operation in compliance year i , determined in accordance with Subsection 14(8), expressed in gigawatt hours; or

(b) zero, if unit u is not part of a gas-to-power operation at the industrial facility;

i is a compliance year; and

u is a unit at the facility.

15. Standby

15 For the purposes of requesting a shorter exemption period for a commercial product that is exiting standby at an industrial facility in clause 8(9)(b) of the regulations, a regulated emitter may request that the exemption period end:

- (a) on the last day of the month when commercial production of the product resumed at the industrial facility;
- (b) one month after the last day of the month when commercial production of the product resumed at the industrial facility; or
- (c) two months after the last day of the month when commercial production of the product resumed at the industrial facility.

16. Calculating Direct Emissions

16(1) For the purposes of calculating regulated industrial emissions for a commercial product at an industrial facility in Subsection 16(3), a regulated emitter shall:

- (a) include as stationary fuel combustion emissions the emissions from the combustion of associated gas used to generate electricity; and
- (b) exclude emissions from the combustion of biomass in accordance with Subsections 4(9) and 4(10).

16(2) For the purposes of calculating regulated electricity emissions for a commercial product at an industrial facility in Subsection 16(4), a regulated emitter shall:

- (a) include as stationary fuel combustion emissions the emissions from the combustion of all fuels, other than associated gas, used to generate electricity; and
- (b) exclude emissions from the combustion of biomass in accordance with Subsections 4(9) and 4(10).

16(3) The regulated industrial emissions for each commercial product produced at the industrial facility during a year shall be determined by:

$$RI_{i-a} = \sum_y \sum_p (GI_{i-a-y-p} \times GWP_p)$$

where:

RI_{i-a} are the regulated industrial emissions for commercial product a in year i , expressed in tonnes of CO₂e;

$GI_{i-a-y-p}$ are the total emissions of a particular prescribed greenhouse gas species p from regulated source category y for commercial product a in year i , including emissions from associated gas but excluding emissions from sources allocated to the generation of electricity, expressed in tonnes of the prescribed greenhouse gas species p ;

GWP_p is the applicable global warming potential for the particular prescribed greenhouse gas species p as listed in Appendix B;

a is a commercial product produced at the industrial facility;

i is a baseline year for the purpose of calculating the baseline emissions level or a compliance year for the purpose of calculating total regulated emissions;

p is a prescribed greenhouse gas species; and

y is an applicable regulated source category included in Table 4 of Appendix C.

16(4) The regulated electricity emissions for each commercial product produced at the industrial facility during a year shall be determined by:

$$RE_{i-a} = \sum_y \sum_p (GE_{i-a-y-p} \times GWP_p)$$

where:

RE_{i-a} are the regulated electricity emissions for commercial product a in year i , expressed in tonnes of CO₂e;

$GE_{i-a-y-p}$ are the total emissions of a particular prescribed greenhouse gas species p from regulated source category y , from sources allocated to electricity production, including from fossil fuels other than associated gas, for commercial product a in year i , quantified in accordance with Subsection 3 (12), expressed in tonnes of the prescribed greenhouse gas species p ;

GWP_p is the applicable global warming potential for the particular prescribed greenhouse gas species p as listed in Appendix B;

a is a commercial product produced at the industrial facility;

i is a baseline year for the purpose of calculating the baseline emissions level or a compliance year for the purpose of calculating total regulated emissions;

p is a prescribed greenhouse gas species; and

y is an applicable regulated source category included in Table 4 of Appendix C.

16(5) The direct emissions for each commercial product at an industrial facility shall be determined by:

$$DE_{i-a} = RI_{i-a} + RE_{i-a}$$

where:

DE_{i-a} are the direct emissions for the industrial facility for the purpose of producing commercial product a in year i , expressed in tonnes of CO₂e;

RI_{i-a} are the regulated industrial emissions for commercial product a in year i , expressed in tonnes of CO₂e;

RE_{i-a} are the regulated electricity emissions for commercial product a in year i , expressed in tonnes of CO₂e;

a is a commercial product produced at the industrial facility; and

i is a baseline year for the purpose of calculating the baseline emissions level or a compliance year for the purpose of calculating total regulated emissions.

17. Baseline Submissions

17(1) When preparing a baseline submission for an industrial facility, a regulated emitter shall:

- (a) complete all required forms;
- (b) provide a quantification methodology document with the required emissions and commercial production information, completed in the format specified by the Minister in an applicable template;
- (c) if an industrial facility has a unit or group of units that are not considered an electricity facility under the regulations, provide a simplified process flow diagram of the layout for the unit or group of units;
- (d) provide a signed declaration from an authorized signing officer for the industrial facility attesting to the accuracy of all information provided in and completeness of the baseline submission;
- (e) include a completed verification report in the format specified by the Minister in an applicable template and a signed statement of verification from a qualified person who performed a verification on the industrial facility; and
- (f) submit all required information to the Minister in the manner specified by the Minister.

17(2) Prior to submitting a baseline submission, a regulated emitter shall ensure that all information contained within the baseline submission is verified by a qualified person.

17(3) For the purposes of clause 15(3)(a) of the regulations, a regulated emitter shall submit a completed and verified baseline submission for an industrial facility within six months from:

- (a) the date of registration of the industrial facility; or
- (b) the transfer of registration pursuant to this standard for an industrial facility that was previously an individual facility within an aggregate facility registered pursuant to *The Aggregate Facility Standard*.

17(4) Notwithstanding Subsection 17(3), if an industrial facility begins production of a new commercial product and a regulated emitter chooses to establish a baseline emissions intensity for that new product pursuant to Subsection 14(3), a regulated emitter shall submit a completed and verified baseline submission for the new product at the industrial facility by June 1 of the first and second compliance year in which the regulated emitter intends to have that product subject to a performance standard.

17(5) A regulated emitter shall submit the completed and verified baseline submission for the electricity generated from the combustion of associated gas at a gas-to-power operation by June 1 of the first compliance year of the gas-to-power operation.

17(6) After a baseline submission for an industrial facility has been reviewed for completeness, the regulated emitter will be provided a written response that:

- (a) approves the information provided in the baseline submission for the industrial facility; or
- (b) indicates the baseline submission for the industrial facility is incomplete or has errors, details of the problem(s) or issue(s), and/or any action required by the regulated emitter, including:
 - (i) providing additional information that may be requested or required;
 - (ii) any corrective action that may be required; and/or
 - (iii) if applicable, having the baseline submission re-verified.

17(7) Upon receipt of a written response in clause 17(6)(b), a regulated emitter shall fulfil any actions required and resubmit the required information prior to the deadline indicated in the written response.

17(8) If a regulated emitter is required to re-verify a baseline submission for a commercial product at an industrial facility in accordance with subclause 17(6)(b)(iii), the regulated emitter shall submit:

- (a) a new statement of verification;
- (b) any new information, including emissions and commercial production data, that was not included in the original baseline submission; and
- (c) any other documentation, reports or forms that the Minister may require.

17(9) Upon resubmission of required information in clause 17(6)(b), the information will be reviewed and the regulated emitter will be provided a written response that:

- (a) provides a statement in accordance with Subsection 17(6); or
- (b) establishes the baseline emissions intensity for each commercial product produced at the industrial facility.

17(10) Notwithstanding Subsection 17(5) and subject to Section 13, if an industrial facility begins generating electricity from the combustion of associated gas at a gas-to-power operation that has been in operation for less than two years:

- (a) the electricity generation from the combustion of associated gas at the gas-to-power operation will be considered a new commercial product; and
- (b) the regulated emitter shall submit a completed and verified baseline submission for the new commercial product by June 1 of the first compliance year after the gas-to-power operation has been in operation for two full years.

18. Calculating Baseline Emissions Intensity

18(1) For the purpose of calculating the baseline emissions intensity for a commercial product at an industrial facility, the baseline emissions for a commercial product at an industrial facility shall be determined by:

$$BE_{i-a} = DE_{i-a}$$

where:

BE_{i-a} are the baseline emissions for the purpose of producing commercial product a in baseline year i , expressed in tonnes of CO₂e;

DE_{i-a} are the direct emissions for the purpose of producing commercial product a in baseline year i , expressed in tonnes of CO₂e, as determined in Subsection 16(5);

a is a commercial product produced at the industrial facility; and

i is a baseline year.

18(2) The baseline emissions level for a commercial product at an industrial facility shall be determined by:

$$BEL_a = \frac{1}{n} \sum_{i=1}^n BE_{i-a}$$

where:

BEL_a is the baseline emissions level for the purpose of producing commercial product a in the baseline years, expressed in tonnes of CO₂e;

BE_{i-a} are the baseline emissions for the purpose of producing commercial product a in baseline year i , expressed in tonnes of CO₂e;

a is a commercial product produced at the industrial facility;

i is a baseline year; and

n is the number of baseline years.

18(3) The baseline production level for a commercial product at an industrial facility shall be determined by:

$$BPL_a = \frac{1}{n} \sum_{i=1}^n P_{i-a}$$

where:

BPL_a is the baseline production level for commercial product a in the baseline years;

P_{i-a} is the amount of commercial product a produced in baseline year i ;

a is a commercial product produced at the industrial facility;

i is a baseline year; and

n is the number of baseline years.

18(4) The baseline emissions intensity for a commercial product at an industrial facility shall be determined by:

$$BEI_a = \frac{BEL_a}{BPL_a}$$

where:

BEI_a is the baseline emissions intensity for commercial product a , expressed in tonnes of CO₂e per unit of product a ;

BEL_a is the baseline emissions level for the purpose of producing commercial product a in the baseline years, expressed in tonnes of CO₂e; and

BPL_a is the baseline production level for commercial product a in the baseline years.

19. Re-establishing Baseline Emissions Intensity

19(1) A regulated emitter shall notify the Minister within 30 days of becoming aware that one of the conditions in clauses 15(5)(a) through (c) and (e) through (f) of the regulations is satisfied.

19(2) If a regulated emitter applies or is required to re-establish the baseline emissions intensity for a commercial product at an industrial facility, the regulated emitter shall verify any information required to re-establish the baseline emissions intensity that has been changed or has not been verified in a previous submission.

19(3) If a regulated emitter applies or is required to re-establish the baseline emissions intensity for a commercial product at an industrial facility, the regulated emitter is not required to re-establish the baseline emissions intensity for another commercial product at the industrial facility, provided the Minister is satisfied that the baseline emissions intensity for the other commercial product is not affected.

19(4) In an application submitted by a regulated emitter to re-establish the baseline emissions intensity for a commercial product at an industrial facility, the regulated emitter shall provide the information necessary to review the current and proposed baseline emissions intensity including:

- (a) a statement by the regulated emitter as to why the application to change the baseline emissions intensity for the commercial product at the industrial facility is being made;
- (b) the proposed new baseline emissions intensity as determined based on the applicable information submitted in the format and manner required under Subsection 17(1);
- (c) evidence that demonstrates the proposed baseline emissions intensity in clause 19(4)(b) is representative for the commercial product at the industrial facility; and
- (d) demonstration that verification required by Subsection 19(2) has occurred, if applicable.

19(5) An application by a regulated emitter to re-establish the baseline emissions intensity for a commercial product at an industrial facility must, in accordance with Section 13, use data from years prior to the compliance year in which the re-established baseline emissions intensity is to apply.

19(6) Upon submission of an application by a regulated emitter the application will be reviewed and the regulated emitter will be provided with a written response that indicates:

- (a) the proposed re-established baseline emissions intensity has been accepted;
- (b) the application was incomplete or contained omissions or errors, with corrective actions and information that is required to be submitted; or
- (c) the application has been denied, with reasons for the denial.

19(7) Upon resubmission of required information by the regulated emitter, the information will be reviewed, in accordance with Section 17 of the Act, and the regulated emitter will be provided with a written response that:

- (a) provides a statement in accordance with Subsection 19(6); or
- (b) establishes the baseline emissions intensity for the commercial product at the industrial facility.

19(8) For the purposes of Subsection 15(5) of the regulations, when requiring a regulated emitter to re-establish a baseline emissions intensity for a commercial product at an industrial facility, the Minister shall:

- (a) provide the regulated emitter who owns or operates the industrial facility with written notice of the Minister's decision along with reasons for the decision;
- (b) provide written instructions, including the verification process that the Minister may require that differs from the verification process outlined in this standard; and
- (c) give the regulated emitter an opportunity to make written representations within 30 business days after receiving the written notice respecting the Minister's decision.

20. Calculating Performance Standards

20(1) The Minister shall determine a performance standard for each commercial product produced at an industrial facility for each reduction period by:

$$PS_{k-a} = PSA_{k-a} \times BEI_a$$

where:

PS_{k-a} is the performance standard for commercial product a in reduction period k , expressed in tonnes of CO₂e per unit of product a ;

PSA_{k-a} is the performance standard allocation for commercial product a in reduction period k determined by Table 1 of the regulations;

BEI_a is the baseline emissions intensity for commercial product a , expressed in tonnes of CO₂e per unit of product a ;

a is a commercial product produced at the industrial facility; and

k is the given reduction period for product a , as established in Section 11.

20(2) If the production of a commercial product at an industrial facility results in industrial process emissions the Minister shall determine the performance standard for that product in a reduction period by:

$$PS_{k-a} = PSA_{k-a} \times \left(BEI_a - \frac{\sum_{i=1}^n (IP_{i-a})}{\sum_{i=1}^n P_{i-a}} \right) + \frac{\sum_{i=1}^n (IP_{i-a})}{\sum_{i=1}^n P_{i-a}}$$

where:

PS_{k-a} is the performance standard for commercial product a in reduction period k , expressed in tonnes of CO₂e per unit of product a ;

PSA_{k-a} is the performance standard allocation for commercial product a in reduction period k determined by Table 1 of the regulations;

BEI_a is the baseline emissions intensity for commercial product a , expressed in tonnes of CO₂e per unit of product a ;

IP_{i-a} are the industrial process emissions associated with the production of commercial product a in baseline year i , if applicable, expressed in tonnes of CO₂e;

P_{i-a} is the amount of commercial product a produced in baseline year i ;

a is a commercial product produced at the industrial facility;

i is a baseline year;

k is the given reduction period for product a , as established in Section 11; and

n is the number of baseline years used in calculating the baseline emissions intensity for commercial product a .

21. Emissions returns

21(1) When preparing an emissions return for an industrial facility, a regulated emitter shall:

- (a) complete all required forms;
- (b) provide a quantification methodology document with the required emissions and commercial production information in the format specified by the Minister in an applicable template;
- (c) if an industrial facility has a unit or group of units that are not considered an electricity facility under the regulations, provide a simplified process flow diagram of the layout for the unit or group of units;

- (d) provide a signed declaration from an authorized signing officer for the industrial facility attesting to the accuracy of all information provided in and completeness of the emissions return;
- (e) include a completed verification report in the format specified by the Minister in an applicable template and a signed statement of verification from a qualified person who performed a verification on the industrial facility;
- (f) in accordance with Subsection 3(11), submit evidence satisfactory to the Minister that supports the use of emission factors or quantification methodologies other than those used in establishing the baseline emissions intensity for the commercial product at the industrial facility; and
- (g) submit all required information to the Minister in the manner specified by the Minister.

21(2) Prior to submitting an emissions return, a regulated emitter shall ensure that all information contained within the return is verified by a qualified person according to Section 25.

21(3) For the purposes of clause 23(1)(a) of the regulations, a regulated emitter shall submit a completed, verified emissions return for an industrial facility by June 1 of the calendar year following the compliance year for which the emissions return is being prepared.

21(4) A regulated emitter is not required to submit an emissions return for a compliance year for an industrial facility if every commercial product produced at the industrial facility is deemed to be on standby under Section 8 of the regulations from January 1 to December 31 of that compliance year.

21(5) If a commercial product produced at an industrial facility is deemed to be in standby for part of a compliance year, the regulated emitter shall:

- (a) include in the emissions return for the compliance year evidence that proves the commercial product produced at the industrial facility was in standby during the compliance year; and
- (b) exclude from the emissions return for the compliance year the emissions and production information associated with the commercial product deemed to be in standby for the portion of the compliance year that the product was in standby, and the exemption period specified in Section 8(9) of the regulations or requested pursuant to Section 15 of this standard.

21(6) If a commercial product produced at an industrial facility was deemed to be in standby for part of a compliance year and remains exempt from accruing a compliance obligation for a portion of the subsequent compliance year as specified in Section 8(9) of the regulations, the regulated emitter shall exclude from the emissions return for the subsequent compliance year the emissions and production information associated with that commercial product for the portion of the subsequent compliance year that the product is exempt from accruing a compliance obligation.

21(7) After a submitted emissions return for an industrial facility has been reviewed for completeness, the regulated emitter will be provided with:

- (a) a written response approving the information provided in the emissions return and confirming any compliance obligation owed or performance credits earned by the regulated emitter; or
- (b) a written response indicating the emissions return is incomplete or has errors, details of the problem(s) or issue(s) and/or any action required by the regulated emitter, including:
 - (i) providing additional information that may be requested or required;
 - (ii) any corrective action that may be required; and/or
 - (iii) if applicable, having the emissions return re-verified.

21(8) Upon receipt of a written response in clause 21(7)(b), a regulated emitter shall fulfil any actions required and resubmit the required information prior to the deadline indicated in the written response.

21(9) If a regulated emitter is required to re-verify an emissions return in accordance with subclause 21(7)(b)(iii), the regulated emitter shall submit:

- (a) a new statement of verification;
- (b) any new information, including emissions and commercial production data, that was not included in the original emissions return; and
- (c) any other documentation, reports or forms that the Minister may require.

21(10) Upon resubmission of required information in clause 21(7)(b), the information will be reviewed and the regulated emitter will be provided a written response subject to Subsection 21(7).

22. Total Regulated Emissions

22(1) The total regulated emissions for an industrial facility in a given compliance year shall be determined by:

$$TE_i = \sum_{a=1}^m (DE_{i-a}) + D_i$$

where:

TE_i are the total regulated emissions for the industrial facility in compliance year i , expressed in tonnes of CO₂e;

DE_{i-a} are the direct emissions for the industrial facility for the purpose of producing commercial product a in compliance year i , determined in accordance with Subsection 16(5), expressed in tonnes of CO₂e;

D_i are the stationary fuel combustion emissions from fuel purchased by the regulated emitter for drilling operations at the industrial facility during compliance year i , determined in accordance with Subsection 22(2), expressed in tonnes of CO₂e;

a is a commercial product produced at the industrial facility;

i is a compliance year; and

m is the number of commercial products produced at the industrial facility in compliance year i .

22(2) If a regulated emitter chooses to report drilling emissions at an industrial facility with a commercial product in the upstream oil and gas sector in a compliance year in accordance with Subsection 4(15), the drilling emissions for the industrial facility shall be determined by:

$$D_i = \sum_p (C_{i-p} \times GWP_p)$$

where:

D_i are the drilling emissions for all drilling operations at the industrial facility in compliance year i , expressed in tonnes of CO₂e;

C_{i-p} are the total emissions of a particular prescribed greenhouse gas species p from all drilling activities at an industrial facility in compliance year i , quantified in accordance with Subsection 3(13), expressed in tonnes of the prescribed greenhouse gas species p ;

GWP_p is the global warming potential for the particular prescribed greenhouse gas species p , as listed in Appendix B;

i is the compliance year; and

p is the prescribed greenhouse gas species.

23. Permitted Emissions

23(1) Subject to Subsection 23(2), the permitted emissions for an industrial facility in a given compliance year shall be determined by:

$$PE_i = \sum_{a=1}^m (PS_{k-a} \times P_{i-a}) + (B_D \times M_i)$$

where:

PE_i are the permitted emissions for the industrial facility in compliance year i , expressed in tonnes of CO₂e;

- PS_{k-a} is the performance standard for commercial product a in reduction period k , expressed in tonnes of CO₂e per unit of product a ;
- P_{i-a} is the amount of commercial product a produced in compliance year i ;
- B_D is the benchmark used for drilling operations at an industrial facility with a commercial product in the upstream oil and gas sector, equal to 0.0255 tonnes CO₂e per metre drilled;
- M_i is the number of metres drilled at an industrial facility in compliance year i through drilling operations using fuel purchased by the regulated emitter;
- a is a commercial product produced in compliance year i ;
- i is a compliance year;
- k is the reduction period for commercial product a ; and
- m is the number of commercial products produced at the industrial facility in compliance year i .

23(2) The Minister shall ensure that the permitted emissions determined for an industrial facility does not result in a regulated emitter receiving permitted emissions for both:

- (a) the portion of the electricity generation from associated gas combusted at a gas-to-power operation in the compliance year that corresponds to associated gas that was flared in the baseline years for the industrial facility; and
- (b) the portion of the baseline emissions intensity that corresponds to the emissions from the associated gas flared in the baseline years for the industrial facility that is being combusted in the compliance year to generate electricity at a gas-to-power operation.

23(3) If a regulated emitter chooses to report emissions from drilling operations at an industrial facility under Subsection 4(15) when calculating the total regulated emissions for the facility under this standard, a regulated emitter shall report the number of metres drilled during the compliance year to determine the permitted emissions for the facility.

24. Compliance Returns

24(1) For the purposes of clause 24(2)(a) of the regulations, if it is determined based on the information provided in an emissions return for a compliance year for an industrial facility that a regulated emitter owes a compliance obligation, the regulated emitter shall submit a compliance return and fulfil the compliance obligation by October 31 of the year following the year in which the emissions return is submitted.

24(2) The compliance return must include the following information:

- (a) any required forms;

- (b) an indication of the compliance options used to fulfil the compliance obligation incurred including, as applicable:
 - (i) a payment to the Government of Saskatchewan for deposit in accordance with the Act;
 - (ii) a list of any performance credits retired to fulfil the compliance obligation;
 - (iii) a list of any CCUS credits retired to fulfil the compliance obligation; and
- (c) a signed declaration from the authorized signing officer attesting to the accuracy and completeness of the compliance return.

24(3) After a submitted compliance return for an industrial facility has been reviewed for completeness, the Minister will provide the regulated emitter with:

- (a) a written response approving the information provided in the compliance return and confirming that the compliance obligation has been fulfilled; or
- (b) a written response indicating that the compliance return is incomplete or has errors, details of the problem(s) or issue(s) and/or any action required by the regulated emitter, including:
 - (i) providing additional information that may be requested or required; and
 - (ii) any corrective action that may be required.

24(4) Upon receipt of a written response in clause 24(3)(b), a regulated emitter shall fulfil any actions required and resubmit the required information prior to the deadline indicated in the written response.

24(5) Upon resubmission of required information in clause 24(3)(b), the information will be reviewed and the regulated emitter will be provided with a written response subject to Subsection 24(3).

25. Verification Requirements

25(1) For the purpose of performing the verification on a baseline submission or an emissions return under the regulations, a qualified person is a person employed by an accredited verification body.

25(2) A regulated emitter shall ensure that all members of the verification team performing a verification on an industrial facility are employed by an accredited verification body that meets the requirements of and is accredited under ISO 14065.

25(3) For the purpose of verifying a baseline submission or an emissions return for an industrial facility in accordance with the regulations and this standard, a regulated emitter shall provide access to the industrial facility, any personnel, records and other information and resources as requested by the verification team conducting the verification.

25(4) A regulated emitter shall ensure that a verification report is prepared for the industrial facility in the format specified by the Minister in an applicable template and in accordance with the ISO 14064-3 standard.

25(5) A regulated emitter shall ensure that before an unmodified, modified or adverse opinion is prepared for a statement of verification, the determination that forms the basis of the opinion is reviewed by an independent reviewer who meets the following qualifications:

- (a) the person is employed by an accredited verification body;
- (b) the person is not a member of the verification team carrying out the verification with respect to the industrial facility; and
- (c) the person has not been a member of a verification team that has performed a verification with respect to the industrial facility for at least three compliance years unless impartiality can be demonstrated by the accredited verification body.

25(6) A regulated emitter shall ensure that the verification of emissions and commercial production data associated with the emissions return or baseline submission for an industrial facility is completed to a reasonable level of assurance in accordance with the ISO 14064-3 standard.

25(7) Materiality is determined according to the following formula:

$$\mathbf{Materiality} = \frac{\sum_i |A_i|}{B} \times 100\%$$

where:

$\sum_i |A_i|$ is:

- (a) for the purposes of the verification of greenhouse gas emissions, the sum of the absolute value of all individual misstatements of greenhouse gas emissions, in tonnes of CO₂e; or
- (b) for the purposes of the verification of commercial production data, the sum of the absolute value of all individual misstatements of production information, in the unit of commercial production selected by the regulated emitter according to Section 14; and

B is:

- (a) for the purposes of the verification of greenhouse gas emissions, the total regulated emissions, in tonnes of CO₂e, as corrected by the third-party verifier; or
- (b) for the purposes of the verification of commercial production data, the total amount of commercial product produced, in the unit of production selected by the regulated emitter according to Section 14, as corrected by the third-party verifier.

25(8) For the purpose of completing a verification statement for an industrial facility, a material discrepancy in the emissions and commercial production data reported by the regulated emitter will exist if the level of materiality exceeds the following thresholds:

- (a) for greenhouse gas emissions,
 - (i) five per cent of quantified greenhouse gas emissions for an industrial facility emitting less than 500,000 tonnes CO₂e in the given compliance year; or
 - (ii) two per cent of quantified greenhouse gas emissions for an industrial facility emitting 500,000 tonnes CO₂e or more in the given compliance year; and
- (b) for production, 0.1 per cent of quantified commercial product for the industrial facility.

25(9) A regulated emitter shall ensure that at the end of the verification process, a statement of verification is prepared reflecting a type of opinion in column 1 of Table 1 based on the corresponding determination made by the verification team in column 2 of Table 1.

25(10) To ensure impartiality with respect to an industrial facility undergoing verification, a regulated emitter shall ensure that a verification team does not perform verification for the industrial facility if there is known to be a current or potential threat to compromise the impartiality of:

- (a) a member of the verification team; or
- (b) the accredited verification body for which the verification team is employed.

25(11) For the purposes of performing verification with respect to a regulated facility, a site visit to the facility is required if:

- (a) no verification team visited the regulated facility for the purposes of conducting a verification in the most recent three compliance years;
- (b) the most recent verification with respect to the regulated facility resulted in an adverse opinion in the statement of verification submitted to the Minister;
- (c) the verification is the first by the accredited verification body with respect to the regulated facility; or
- (d) a verification of baseline emissions intensity data is required in accordance with Subsection 19(2).

Table 1
Types of Opinion
[Subsection 25(9)]

Type of Opinion	Determination of Verification Team
Unmodified	<p>Both of the following circumstances apply:</p> <p>(i) there is a reasonable level of assurance that the emissions return or baseline submission contains no material discrepancy in emissions or production parameters; and</p> <p>(ii) the emissions return or baseline submission was prepared in accordance with this standard.</p>
Modified	<p>Both of the following circumstances apply:</p> <p>(i) there is a reasonable level of assurance that the emissions return or baseline submission contains no material discrepancy in emissions or production parameters; and</p> <p>(ii) the emissions return or baseline submission was prepared substantially in accordance with this standard.</p>
Adverse	<p>One or both of the following circumstances apply:</p> <p>(i) there is a reasonable level of assurance that the emissions return or baseline submission contains a material discrepancy in emissions or production parameters; and/or</p> <p>(ii) the emissions return or baseline submission was not prepared substantially in accordance with this standard.</p>

25(12) A site visit conducted at an industrial facility under the requirements of the Government of Canada’s *Output-Based Pricing System Regulations* while that facility was subject to the Government of Canada’s *Output-Based Pricing System Regulations* is also considered a site visit by that accredited verification body for the purposes of the regulations and this standard.

25(13) For the purposes of Subsection 25(11) the verification team conducting a verification on a facility may undertake a virtual site visit if:

- (a) the verification is not with respect to a baseline submission for the facility;
- (b) an in-person site visit has previously been undertaken for the industrial facility as part of a verification;
- (c) the accredited verification body conducting the verification also conducted the most recent verification for the facility; and

(d) the virtual site visit enables the verification team to complete the verification to a reasonable level of assurance.

25(14) A regulated emitter shall ensure that all records and information respecting the verification of an emissions return or baseline submission are retained and accessible upon request for at least seven years after the date on which the records or information are created.

26. Audits and Inspections

26 The Minister may perform an audit or inspection on an industrial facility in accordance with Section 67 of the Act.

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Appendix A: Sectors Excluded from the Regulations

Table 2: Excluded Sectors
Agriculture
Transportation (other than on-site transportation)
Distribution pipelines ¹
Landfills
Public Institutions (universities, schools and hospitals, municipally owned infrastructure)
District heating

¹ Distribution pipelines include pipelines that distribute processed natural gas, their associated installations and pipelines that are downstream of a metering station.

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Appendix B: Global Warming Potentials

Table 3: Global Warming Potentials for Prescribed Greenhouse Gas Species		
Greenhouse Gas Species	Chemical Formula	100 Year Global Warming Potential from AR5 ¹
Carbon Dioxide	CO ₂	1
Methane	CH ₄	28
Nitrous Oxide	N ₂ O	265
Sulphur Hexafluoride	SF ₆	23,500
Perfluorocarbons (PFCs)		
Perfluoromethane	CF ₄	6,630
Perfluoroethane	C ₂ F ₆	11,100
Perfluoropropane	C ₃ F ₈	8,900
Perfluorobutane	C ₄ F ₁₀	9,200
Perfluorocyclobutane	c-C ₄ F ₈	9,540
Perfluoropentane	C ₅ F ₁₂	8,550
Perfluorohexane	C ₆ F ₁₄	7,910
Hydrofluorocarbons (HFCs)		
HFC-23	CHF ₃	12,400
HFC-32	CH ₂ F ₂	677
HFC-41	CH ₃ F	116
HFC-43-10mee	CF ₃ CHFCHFCF ₂ CF ₃	1,650
HFC-125	CHF ₂ CF ₃	3,170
HFC-134	CHF ₂ CHF ₂	1,120
HFC-134a	CH ₂ FCF ₃	1,300
HFC-143	CH ₂ FCHF ₂	328
HFC-143a	CH ₃ CF ₃	4,800
HFC-152a	CH ₃ CHF ₂	138
HFC-227ea	CF ₃ CHFCF ₃	3,350
HFC-236fa	CF ₃ CH ₂ CF ₃	8,060
HFC-245ca	CH ₂ FCF ₂ CHF ₂	716

¹ Global warming potentials taken from IPCC's Fifth Assessment Report. See Table 8.A.1 in https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter08_FINAL.pdf

Appendix C: Regulated Source Categories

Table 4: Regulated Source Categories Included in Direct Emissions									
Greenhouse Gas	Stationary Fuel Combustion Emissions	Industrial Process Emissions	Industrial Product Use Emissions	Venting Emissions	Flaring Emissions	Leakage Emissions	On-site Transportation Emissions	Waste Emissions	Waste-water emissions
Carbon dioxide ¹	*	*	N/A	*	*	*	*	*	*
Methane ²	*	*	N/A	*	*	*	*	*	*
Nitrous oxide ³	*	*	N/A	*	*	*	*	*	*
Sulphur hexafluoride	N/A	*	*	N/A	N/A	N/A	N/A	N/A	N/A
Hydrofluorocarbons (HFC)	N/A	By species	By species	N/A	N/A	N/A	N/A	N/A	N/A
Perfluorocarbons (PFC)	N/A	By species	By species	N/A	N/A	N/A	N/A	N/A	N/A

¹ excluding CO₂ emissions from biomass combustion, decomposition and fermentation.

² excluding CH₄ emissions from biomass combustion for the purpose of generating useful heat or work.

³ excluding N₂O emissions from biomass combustion for the purpose of generating useful heat or work.